

## SUBJECT TEACHING GUIDE

### G1012 - Design of Electronic Applications

#### Degree in Industrial Electronic Engineering and Automatic Control Systems

Academic year 2019-2020

1. IDENTIFYING DATA			
Degree	Degree in Industrial Electronic Engineering and Automatic Control Systems	Type and Year	Optional. Year 4
Faculty	School of Industrial Engineering and Telecommunications		
Discipline	Subject Area: Electronic Technology Optional Module		
Course unit title and code	G1012 - Design of Electronic Applications		
Number of ECTS credits allocated	6	Term	Semester based (2)
Web			
Language of instruction	Spanish	English Friendly	Yes Mode of delivery Face-to-face

Department	DPTO. TECNOLOGIA ELECTRONICA E INGENIERIA DE SISTEMAS Y AUTOMATICA
Name of lecturer	FRANCISCO JAVIER DIAZ RODRIGUEZ
E-mail	javier.diaz@unican.es
Office	E.T.S. de Ingenieros Industriales y de Telecomunicación. Planta: - 3. DESPACHO PROFESORES (S3083)
Other lecturers	MIGUEL ANGEL ALLENDE RECIO

### 3.1 LEARNING OUTCOMES

- After completing the course, students should achieve the objectives of the course

### 4. OBJECTIVES

Practical work about multidisciplinary electronic system; from design to documentation, using the knowledge and skills acquired in the degree.

Development of a complete electronic system, integrating analog, digital and power parts, applied to a real application.

Teamwork with oral presentation

## 6. COURSE ORGANIZATION

CONTENTS	
1	Introduction
2	Application Development
3	Final results

## 7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Continuous assessment tests	Laboratory evaluation	No	Yes	30,00
Oral presentation of the work	Laboratory evaluation	No	Yes	70,00
<b>TOTAL</b>				<b>100,00</b>
Observations				
The assessment is performed continuously tracking the student's work during each class session. After completing the course the students delivered a job and make a presentation of the work developed. The evaluation of this work together with the presentation, provide the final grade of each student.				
Observations for part-time students				

## 8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC
J.M. Angulo, B. García, I. Angulo, J. Vicente. Microcontroladores avanzados dsPIC. Controladores Digitales de Señales. Arquitectura, programación y aplicaciones. Thomson. 2006.
R. W. Erickson, D. Maksimovic. Fundamentals of Power Electronics 2nd Ed. Kluwer Academic Publisher, 2001.
A. Barrado, A. Lázaro. Problemas de Electrónica de Potencia. Pearson Prentice Hall. 2007.
Xilinx y Altera. Documentación on-line.
J. Hamblen, T. Hall y M. Furman. Rapid Prototyping of Digital Systems - SoPC Edition, Springer, 2007.